

ABSTRACT

The present invention provides a liquid hypergolic propellant. In particular, a liquid hypergolic propellant is provided, containing reactive metals and/or reactive metal salts, and one or more liquid fuels, which is hypergolic when combined with an oxidizer. In addition, a sensitizer and gelling agent may be added. The reactive metals and/or reactive metal salts are defined by Formula I as follows:



wherein A is one or more of any of Li, Na, and K; M is one or more of any of B, C, and Al; H is H; x is 0-3, y is 0 or greater, and z is 0 or greater, and wherein when x is 0, y is 1, and when y is 0, x is 1. The fuels are defined by the following Formula II as follows:



wherein x is 0-8, y is 1-18, z is 0-4, and v is 0-5, and wherein when x is 0, v is 1 or greater.